

684492SequenceListing.txt
SEQUENCE LISTING

<110> Scott, Roderick

<120> Seeds

<130> 68449.000002

<140> 10/591,418

<141> 2006-09-01

<150> PCT/GB2005/000857

<151> 2005-03-07

<150> GB 0405093.5

<151> 2004-03-05

<150> GB 0406275.8

<151> 2004-03-19

<150> GB 0406729.4

<151> 2004-03-25

<160> 66

<170> PatentIn version 3.2

<210> 1

<211> 8718

<212> DNA

<213> Arabidopsis thaliana

<400> 1

agccattttg taactgacca ccgagtaatc tgtaatctga gctcttttat taatcggatt
60

gaataaattc gcttggagtc cgtcagtcgt gtccgtgagc gcgtgtctca ctcgcttgag
120

ctgatgaagt gcgataatga cgtggcatgt tgggatggag accaaagacc agcattttat
180

tttattttat agtaactaat tttaaaaacc aaacaacctg agattaaaat tttaattttt
240

actgtactgt agtaaatttg ggtcctgatt aagattaggc atatttatct catagtttat
300

aacaagtagc agctgaaatt tgtattacta gcttatagta attaaactaa aaactacgtt
360

ccagggttta aattattggt taaagaagat ataataatat attaagaaaa tagttaatta

684492SequenceListing.txt

420

aggtaaggag gaaagtaggg tttggctctgt aggttagggg tcaaagaggg aagagattag
480

gagaaaggaa gcatgaaggc atgacccatt tcttcaatta gtgctcctta atctggtgac
540

acgtgtaggt cccacgtgta atcacttcac attgttattt ttcaaaaaat caattagtaa
600

aaacaaaact ttgtccatca tcaaatagta gtagtttttt atgtgtgggtt acaatattgt
660

aagaagctct ccccttttta ctatgtaatt caaccccact ctaattttta aaatatttat
720

gtaaagcttt acccgaaaac aatctatcat gggttggtaa tgacacattt cattaacagt
780

gtagagaat gattccttta atttttctac agtaaaatgt taggtgatct cattgtacta
840

catcggaaaa tactcaaaat tatgtcgtgt aatttagata atggacgaat atggttttga
900

aatatttatg gatacccaac aagatttctt aactagaaag acaaaaaaat agagcacatt
960

ttgctcgttt tccatcaacc ctatttctcc aatttggttca catcatgatc aaaaatacag
1020

tagcaattaa aaaataaaat aacaaatata aatggctata tagatcaacc ctatctagct
1080

attagtatta ctagaaattg acaataaagg aaacattcac gtgtgtgagc atgtactact
1140

ctacacacat gtccacagtt attatatact gagtactagt atacgttgat gttatcaata
1200

ataaaaactc gaaattaagt attattttct tataataatc tatttaacca tatttgctac
1260

tgtactattht agtctattht cttttgccaa cttttgtatt aaatattttht actattagtht
1320

tcaattatag gtctatcact atgtatatgt ccgaataatg gtctaaaatt gttaatataa
1380

aatacagatt ttattttcagc taaagatagt tgaaattaca caagaaaata gaagagataa
1440

684492SequenceListing.txt

aatgatcaa tcagctatgt aagacgtcgt atggatagtt caataattgt ggtaatactt
1500

aaagacatat atcaaaatta tcaacaagcc tcgaacacaa actttacaaa aagcctgtgt
1560

ctactttatg agtgtttgat tattaaattg caaggtcgta gtataaaaat ttcgtaggct
1620

ttcaggacac aagattaaat tcatttatct aaatggatgt ggagtacttt tattttttata
1680

tatcaaaatg gtgatgatat acgaagacca tatatttaga ttattaaaga aaaaacgaga
1740

aaagaagaaa gaaaatataa aaaaatgggt tttcttttta acggacaaag attcctacaa
1800

tggttgcttt tagaccacac acaaatgcta cacagtactc ttgggtccca cacctcttag
1860

caagtgcgtt accaacacgt gaatttcctc tccccatttt ctcgtccttt tcctctcaat
1920

attgtatcgt ctcgtttttcc ttgtcatatc gcgtgtgacg tgttattggc ttattgctga
1980

acagtcttct tttttatttt ccatcggtat cctgattttt ttttttttcc aaatttgatt
2040

ttcatgggtt gtaattttgc aatagatttt gtgtttcaca gagagatagt ttacgtgttg
2100

ttaaaaataa tttgtgcaaa atagtgtgcg tgtgttaaatt attaaacgat atataataat
2160

tagaagaaaa taaaaagttt tgtcgcgatt agttatttga tatttacctt gttcttttgt
2220

ttatcgctgc gacaagcacc gacggtataa aatataaaga aaaaaagaaa gagagatgaa
2280

ggtgagatga atgaaagagt cgcagcgaca gatctgaaga gataggagaa agggaatttg
2340

agacgctgaa aattccagcg tctacggaat ggccgaatta cagtcgatgc ggcagagatg
2400

aaaaaaatga gaaatgaaag tgaaaaagag atgagaactt tttttgggtc gcaggtagct
2460

684492SequenceListing.txt

gacgcagcaa tcaacaaaag aacatggcca acgttttagt agatactact ataaaagaaa
2520

aagggttgatt taattcattc gtaatttgga ctttaattttt ttttaggaac actaattaat
2580

cttatttgcc agctgtatga gtggactaca ataaactctt gtctataaac cagattttct
2640

tccttttttaa cgcttccact tacaacaata tatgtaaata tgtaattatg acgggggcata
2700

cggaatttta atttttgaag cagattcatc ccattagcca gctgtattaa gtggtaatcc
2760

aagagttaat ttagttgttc agcaaatgat tttagataaa atcaactact agtttaaaat
2820

aactatcgaa tgactgttaa ggcttcgtat tttttgttct gccatcagga tatcataaat
2880

atggttgagg ttcgtataat attcgacgat cttttatata tctgagttgt aattgaatta
2940

gagaaaataa aaaacagata atgaaacgtc tttgtttttc cataaaaaga aaaacagggt
3000

aaattaaagt acgagagatt cacgagacga aaattcctag aggcgcacga tagccaaaag
3060

accatagaaa atgacatccg aaatatcttt aaaatgctaa aatgcacata tttttctggt
3120

gccacgtagc atttttctcc ctctctcgtt ctctctacgt ccaccagac ctgcctgttc
3180

acagcacgac aaagccactt cccaataaaa acacaacacc tttcccattg acgctctctt
3240

tcccaaacac cgttatcctc tttacccaat caaaagttga cgcttgctca cgacttgttg
3300

acgccgttag tcccatctaa aaaagtaaag cagcctttct tacttgctaa tcccctctac
3360

acatttaatt tattttctcc cctaattggat tttttttggc aacttgagta tttatttttc
3420

aactcacagt aactgtaaat aaataaaagt attcaactca cagtcaccag taaataaata
3480

ctaccagacc atagtttttt caagaattgt tttgggtcaac aatttttagga tgacttaa

684492SequenceListing.txt

3540

tgctatatatt ctgggggaaat acgacttgga aatgtctgca atttgggtct tttcttcaat
3600

ttatcttctc caatttgttt tttaaaaaat taaatttttag aaaaggatat gtcaattttt
3660

tctattgaaa aggctttatt aaaaaataag aaaaagtgga ggaaagaaaa taaaatcgtc
3720

acttgctttt ggttttgtga ggctgcagac cctgggtccc cggaatggt tacaaccggt
3780

aatagccggt atgaaagagg gaatggtaac cggatgaatgc cggttatcca tatgggttag
3840

aagtttaccg cggttgaaat gattgaagct gagttttgac tacctctggt taagcccatt
3900

ggctgcctca taccagaaaa aacaaaagga taggaaagac gaagaaataa aaagagagag
3960

aatgttagag agacaaactc tgagagacaa aacaagagaa aatcgctcgt cgtcgggtatt
4020

caagcgtctg tgactccgat aaagcctaga ctagcgagga cggcgagaga gagagagaga
4080

gagctttgga gttgtcgtat ctctaaatcg gaggcaattt gaggtgaaat tgggtggttt
4140

atcgtttgat tctaggggtt atcttctctg atagttttat cgagtaatgt caaggagcta
4200

aactagtggg gattgtgttt gttagtgaga taaagacaaa ggaaggaatc aagtggacta
4260

ccgaagcgag ttttgagctt tttcagagac ggatttggag atttcttggt gatatcgtct
4320

gcttagaggc ttatttggtt ccagatgaaa cagatctgag cttcggaagg tatggcgagt
4380

tcggagggtt caatgaaagg taatcgtgga ggagataact tctcctcctc tggtttttagt
4440

gaccctaagg agactagaaa tgtctccgtc gccggcgagg ggcaaaaaag taattctacc
4500

cgatccgctg cggctgagcg tgcttgtaag tctccgtttc ttaggggtttc ttaagcttgg
4560

684492SequenceListing.txt

ttttggttac agactgactt gatctaattt atcttcttct tcttcgtctt catagtggac
4620

cctgaggctg ctctttacag agagctatgg cacgcttggt ctggtccgct tgtgacgggt
4680

cctagacaag acgaccgagt cttctatttt cctcaaggac acatcgagca ggtgagatat
4740

ttcatctatg agttcttgct atttttggct aaatctttga gttaaccctt ctgtgattcg
4800

tacctgttga gatattttct aatgaacttt gtcggtttcc attgttttat gattaggtgg
4860

aggcttcgac gaaccaggcg gcagaacaac agatgcctct ctatgatctt ccgtcaaagc
4920

ttctctgtcg agttattaat gtagatttaa aggtaggttt ctttaacttc ttggaaaatt
4980

ttggtttctg tgtcttggat tgtcagctaa caagagtttt gtttatgatt ttacaggcag
5040

aggcagatac agatgaagtt tatgcgcaga ttactcttct tcctgaggct aatgtaagtt
5100

ttgttttctg atttattggg ttgagtgttg tagagggtgat cttattcttc aagatgctga
5160

attctatata ttttttgttc catacagcaa gacgagaatg caattgagaa agaagcgcct
5220

cttcctccac ctccgagggt ccagggtgcat tcgttctgca aaaccttgac tgcattccgac
5280

acaagtacac atggtggatt ttctgttctt aggcgacatg cggatgaatg tctcccacct
5340

ctggttggtg tttcatttgc gcttctaact atctattcat tggcttattt ttcctgaatt
5400

ttgttctaag attgccttca attcattttt tgtttcttcc ctcaggatat gtctcgacag
5460

cctcccactc aagagttagt tgcaaaggat ttgcatgcaa atgagtggcg attcagacat
5520

atattccggg gtataggaat ctgtaacttt tttattttct gtttttctcg agtctgtgtg
5580

684492SequenceListing.txt

tcatcaaact tatctggttg ttgatgtttg tgataatgga ccaggtcaac cacggaggca
5640

tttgctacag agtgggtgga gtgtgtttgt tagctccaaa aggctagttag caggcgatgc
5700

gtttatatatt ctaaggtttg tggatttttag ttcattgttt tcttttagctg tatctgttag
5760

tttctataat gtggaatatc ttaatcttct acaggggcga gaatggagaa ttaagagttag
5820

gtgtaaggcg tgcgatgcga caacaaggaa acgtgccgtc ttctgttata tctagccata
5880

gcatgcatct tggagtactg gccaccgcat ggcatgccat ttcaacaggg actatgttta
5940

cagtctacta caaaccagg tttgtatttg tattagctca caaaacagct ttcagttttt
6000

tgagctcttt gctttgtatg tctctatatg tctgatgctt ggtagtgaat cactctacta
6060

aattttcatg cgggtgttggt ttgtttaata caggacgagc ccattctgagt ttattgttcc
6120

gttcgatcag tatatggagt ctgttaagaa taactactct attggcatga gattcaaaat
6180

gagatttgaa ggcgaagagg ctcttgagca gaggtaaaac ctgtcttctg cttttgaaat
6240

atgttagctc ttgagccttt ttctcttgga ataacgaacc taacaagttag tattgattta
6300

tattaggttt actggcacia tcgttgggat tgaagagtct gacccacta ggtggccaaa
6360

atcaaagtgg agatccctca aggtatgacc tagtttctag agaggatcaa gactattgtt
6420

tgaatataat gaatgctgat tgttcaattg tctttcaggt gagatgggat gagacttcta
6480

gtattcctcg acctgataga gtatctccgt ggaaagtaga gccagctctt gtcctcctg
6540

ctttgagtcc tgttccaatg cctaggccta agaggcccag atcaaatata gcaccttcat
6600

ctcctgactc ttcgatgctt accagagaag gtaatgtctt ccccttccac tgtagtacac
Page 7

684492SequenceListing.txt

6660

atagtagtgc gtctgaaact taattgaact tgtcagtggg agtctaattc attgtacaca
6720

aaacaggtac aactaaggca aacatggacc ctttaccagc aagcggactt tcaaggggtct
6780

tgcaaggtca agaatactcg accttgagga cgaaacatac tgagagtgtg gagtgtgatg
6840

ctcctgagaa ttctgtttgtc tggcaatctt cagcggatga tgataagggtt gacgtgggtt
6900

cggtttctag aagatatgga tctgagaact ggatgtcctc agccaggcat gaacctactt
6960

acacagattt gctctccggc tttgggacta acatagatcc atcccatggg cagcggatac
7020

ctttttatga ccattcatca tcaccttcta tgcttgcaaa gagaatcttg agtgattcag
7080

aaggcaagtt cgattatctt gctaaccagt ggcagatgat acactctggg ctctccctga
7140

agttacatga atctcctaag gtacctgcag caactgatgc gtctctccaa gggcgatgca
7200

atgttaaata cagcgaatat cctgttctta atgggtctatc gactgagaat gctggtggta
7260

actggccaat acgtccacgt gctttgaatt attatgagga agtgggtcaat gctcaagcgc
7320

aagctcaggc tagggagcaa gtaacaaaac aacccttcac gatacaagag gagacagcaa
7380

agtcaagaga agggaactgc aggctctttg gcattcctct gaccaacaac atgaatggga
7440

cagactcaac catgtctcag agaaacaact tgaatgatgc tgcgggggctt acacagatag
7500

catcacaaa gggttcaggac ctttcagatc agtcaaaagg gtcaaaatca acaaacgatc
7560

atcgtgaaca gggaagacca ttccagacta ataatcctca tccgaaggat gctcaaacga
7620

aaaccaactc aagtaggagt tgcacaaaagg taaatttttg caatatgtag cacaaagtgt
7680

684492SequenceListing.txt

atgaggttgt gataaccctt gaatcacttt tcaactaaca catgacacat tgatgtaaag
7740

gttcacaagc agggaattgc acttggccgt tcagtggatc tttcaaagtt ccaaaactat
7800

gaggagttag tcgctgagct ggacaggctg tttgagttca atggagagtt gatggctcct
7860

aagaaagatt ggttgatagt ttacacagat gaagagaatg atatgatgct tgttggtgac
7920

gatccttggc agtaagattt tgcaaatttt ccatccttagt ttatatcgat gttagtgttt
7980

ttcttataac actgacacaa tgatctctct tgcagggagt tttgttgcat ggttcgcaaa
8040

atcttcatat acacgaaaga ggaagtgagg aagatgaacc cggggacttt aagctgtagg
8100

agcgaggaag aagcagttgt tggggaagga tcagatgcaa aggacgcaa gtctgcatca
8160

aatccttcat tgtccagcgc tgggaactct taaacaaaca aaataaccaa caaccctttt
8220

gctgcaagcc gaggtatgta aaagcttttg agatattagt agactagaga cacagccaaa
8280

agtttatgtc attacattcg actgatgttt gttctgttaa tgacagcagg atggggggtcg
8340

attggtggag actggagagc aaaatgggat gatgggttta agataagata ttaaaaatgc
8400

aatttttgaa gtatttttgtt ggccacttag ataattagca tcttccatca cccttattat
8460

ctatctaata ataattaata gatattataa agtaaaacat aaaaaggtta caggtattat
8520

atagtagaat atgaaaagct cttttataag tagaatatga tgggtgtggag ttgtagtcgg
8580

aggctggat cggttctttt tatggatgta tttttttcct tcttccaaag atctcttgaa
8640

gtctttttat tgtttatatt aatcccaatg tacataagtt ttcaagctct tgcccttttt
8700

684492SequenceListing.txt

taattatctt gtcgattc
8718

<210> 2
<211> 3384
<212> DNA
<213> Arabidopsis thaliana

<400> 2
cccattggtc gcctcatacc cagaaaaaca aaaggatagg aaagacgaag aaataaaaag
60

agagagaatg ttagagagac aaactctgag agacaaaaca agagaaaatc gctcgtcgtc
120

ggtattcaag cgtctgtgac tccgataaag cctagactag cgaggacggc gagagagaga
180

gagagagagc tttggagttg tcgtatctct aaatcggagg caatttgagt gagataaaga
240

caaaggaagg aatcaagtgg actaccgaag cgagttttga gctttttcag agacggattt
300

ggagatttct tgttgatatc gtctgcttag aggcttattt ggtaccagat gaaacagatc
360

tgagcttcgg aaggatatggc gagttcggag gtttcaatga aaggtaatcg tggaggagat
420

aaattctcct cctctggttt tagtgaccct aaggagacta gaaatgtctc cgtcgccggc
480

gaggggcaaa aaagtaattc tacccgatcc gctgcggctg agcgtgcttt ggaccctgag
540

gctgctcttt acagagagct atggcacgct tgtgctggc cgcttgtgac ggttcctaga
600

caagacgacc gagtcttcta ttttcctcaa ggacacatcg agcaggtgga ggcttcgacg
660

aaccaggcgg cagaacaaca gatgcctctc tatgatcttc cgtcaaagct tctctgtcga
720

gttattaatg tagattttaa ggcagaggca gatacagatg aagtttatgc gcagattact
780

cttcttcctg aggctaata agacgagaat gcaattgaga aagaagcgcc tcttcctcca
840

684492SequenceListing.txt

cctccgaggt tccaggtgca ttcgttctgc aaaaccttga ctgcatccga cacaagtaca
900

catggtggat tttctgttct taggcgacat gcggatgaat gtctcccacc tctggatatg
960

tctcgacagc ctcccactca agagttagtt gcaaaggatt tgcatgcaaa tgagtggcga
1020

ttcagacata tattccgggg tcaaccacgg aggcatttgc tacagagtgg gtggagtgtg
1080

tttgtagct ccaaaaggct agttgcaggc gatgcgttta tatttctaag gggcgagaat
1140

ggagaattaa gagttggtgt aaggcgtgcg atgcgacaac aaggaaacgt gccgtcttct
1200

gttatatcta gccatagcat gcattcttga gtactggcca ccgcatggca tgccatttca
1260

acagggacta tgtttacagt ctactacaaa cccaggacga gcccatctga gtttattggt
1320

ccgttcgatc agtatatgga gtctgttaag aataactact ctattggcat gagattcaaa
1380

atgagatttg aaggcgaaga ggctcctgag cagaggttta ctggcacaat cgttgggatt
1440

gaagagtctg atcctactag gtggccaaaa tcaaagtgga gatccctcaa ggtgagatgg
1500

gatgagactt ctagtattcc tcgacctgat agagtatctc cgtggaaagt agagccagct
1560

cttgctctc ctgctttgag tcctgttcca atgcctaggc ctaagaggcc cagatcaaat
1620

atagcacctt catctcctga ctcttcgatg cttaccagag aaggtacaac taaggcaaac
1680

atggaccctt taccagcaag cggactttca agggctctgc aaggtaaga atactcgacc
1740

ttgaggacga aacatactga gagtgtagag tgtgatgctc ctgagaattc tgttgtctgg
1800

caatcttcag cggatgatga taaggttgac gtggtttcgg gttctagaag atatggatct
1860

gagaactgga tgtcctcagc caggcatgaa cctacttaca cagatttgct ctccggcttt

684492SequenceListing.txt

1920

gggactaaca tagatccatc ccatgggtcag cggatacctt tttatgacca ttcatcatca
1980

ccttctatgc ctgcaaagag aatcttgagt gattcagaag gcaagttcga ttatcttgct
2040

aaccagtggc agatgataca ctctgggtctc tccctgaagt tacatgaatc tcctaaggta
2100

cctgcagcaa ctgatgcgtc tctccaaggg cgatgcaatg ttaaatacag cgaatatcct
2160

gttcttaatg gtctatcgac tgagaatgct ggtggtaact ggccaatacg tccacgtgct
2220

ttgaattatt atgaggaagt ggtcaatgct caagcgcaag ctcaggctag ggagcaagta
2280

acaaaacaac ccttcacgat acaagaggag acagcaaagt caagagaagg gaactgcagg
2340

ctctttggca ttctcttgac caacaacatg aatgggacag actcaaccat gtctcagaga
2400

aacaacttga atgatgctgc ggggcttaca cagatagcat caccaaaggt tcaggacctt
2460

tcagatcagt caaaagggtc aaaatcaaca aacgatcatc gtgaacaggg aagaccattc
2520

cagactaata atcctcatcc gaaggatgct caaacgaaaa ccaactcaag taggagttgc
2580

acaaagggtc acaagcaggg aattgcactt ggccgttcag tggatctttc aaagttccaa
2640

aactatgagg agttagtcgc tgagctggac aggctgtttg agttcaatgg agagttgatg
2700

gctcctaaga aagattgggtt gatagtttac acagatgaag agaatgatat gatgcttggt
2760

ggtgacgatc cttggcagga gttttgttgc atggttcgca aaatcttcat atacacgaaa
2820

gaggaagtga ggaagatgaa cccggggact ttaagctgta ggagcgagga agaagcagtt
2880

gttggggaag gatcagatgc aaaggacgcc aagtctgcat caaatccttc attgtccagc
2940

684492SequenceListing.txt

gctgggaact cttaaacaaa caaaataacc aacaaccctt ttgctgcaag ccgaggatgg
3000

gggtcgattg gtggagactg gagagcaaaa tgggatgatg ggtttaagat aagatattaa
3060

aaatgcaatt tttgaagtat tttgttgGCC acttagataa ttagcatctt ccatcaccct
3120

tattatctat ctaataataa ttaatagata ttataaagta aaacataaaa aggttacagg
3180

tattatatag tagaatatga aaagctcttt tataagtaga atatgatggg gtggagttgt
3240

agtcggaggc tggtatcggg tctttttatg gatgtatttt tttccttctt ccaagatct
3300

cttgaagtct ttttattggt tatattaatc ccaatgtaca taagttttca agctcttgcc
3360

cttttttaat tatcttgtcg attc
3384

<210> 3
<211> 859
<212> PRT
<213> Arabidopsis thaliana

<400> 3

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn
1 5 10 15

Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val
65 70 75 80

684492SequenceListing.txt

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn
 85 90 95
 Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu
 100 105 110
 Leu Cys Arg Val Ile Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp
 115 120 125
 Glu Val Tyr Ala Gln Ile Thr Leu Leu Pro Glu Ala Asn Gln Asp Glu
 130 135 140
 Asn Ala Ile Glu Lys Glu Ala Pro Leu Pro Pro Pro Pro Arg Phe Gln
 145 150 155 160
 Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His
 165 170 175
 Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro
 180 185 190
 Leu Asp Met Ser Arg Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp
 195 200 205
 Leu His Ala Asn Glu Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro
 210 215 220
 Arg Arg His Leu Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys
 225 230 235 240
 Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly
 245 250 255
 Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val
 260 265 270
 Pro Ser Ser Val Ile Ser Ser His Ser Met His Leu Gly Val Leu Ala
 275 280 285

684492SequenceListing.txt

Thr Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr
 290 295 300
 Lys Pro Arg Thr Ser Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr
 305 310 315 320
 Met Glu Ser Val Lys Asn Asn Tyr Ser Ile Gly Met Arg Phe Lys Met
 325 330 335
 Arg Phe Glu Gly Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile
 340 345 350
 Val Gly Ile Glu Glu Ser Asp Pro Thr Arg Trp Pro Lys Ser Lys Trp
 355 360 365
 Arg Ser Leu Lys Val Arg Trp Asp Glu Thr Ser Ser Ile Pro Arg Pro
 370 375 380
 Asp Arg Val Ser Pro Trp Lys Val Glu Pro Ala Leu Ala Pro Pro Ala
 385 390 395 400
 Leu Ser Pro Val Pro Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Ile
 405 410 415
 Ala Pro Ser Ser Pro Asp Ser Ser Met Leu Thr Arg Glu Gly Thr Thr
 420 425 430
 Lys Ala Asn Met Asp Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu
 435 440 445
 Gln Gly Gln Glu Tyr Ser Thr Leu Arg Thr Lys His Thr Glu Ser Val
 450 455 460
 Glu Cys Asp Ala Pro Glu Asn Ser Val Val Trp Gln Ser Ser Ala Asp
 465 470 475 480
 Asp Asp Lys Val Asp Val Val Ser Gly Ser Arg Arg Tyr Gly Ser Glu
 485 490 495

684492SequenceListing.txt

Asn Trp Met Ser Ser Ala Arg His Glu Pro Thr Tyr Thr Asp Leu Leu
 500 505 510
 Ser Gly Phe Gly Thr Asn Ile Asp Pro Ser His Gly Gln Arg Ile Pro
 515 520 525
 Phe Tyr Asp His Ser Ser Ser Pro Ser Met Pro Ala Lys Arg Ile Leu
 530 535 540
 Ser Asp Ser Glu Gly Lys Phe Asp Tyr Leu Ala Asn Gln Trp Gln Met
 545 550 555 560
 Ile His Ser Gly Leu Ser Leu Lys Leu His Glu Ser Pro Lys Val Pro
 565 570 575
 Ala Ala Thr Asp Ala Ser Leu Gln Gly Arg Cys Asn Val Lys Tyr Ser
 580 585 590
 Glu Tyr Pro Val Leu Asn Gly Leu Ser Thr Glu Asn Ala Gly Gly Asn
 595 600 605
 Trp Pro Ile Arg Pro Arg Ala Leu Asn Tyr Tyr Glu Glu Val Val Asn
 610 615 620
 Ala Gln Ala Gln Ala Gln Ala Arg Glu Gln Val Thr Lys Gln Pro Phe
 625 630 635 640
 Thr Ile Gln Glu Glu Thr Ala Lys Ser Arg Glu Gly Asn Cys Arg Leu
 645 650 655
 Phe Gly Ile Pro Leu Thr Asn Asn Met Asn Gly Thr Asp Ser Thr Met
 660 665 670
 Ser Gln Arg Asn Asn Leu Asn Asp Ala Ala Gly Leu Thr Gln Ile Ala
 675 680 685
 Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser Lys Gly Ser Lys Ser
 690 695 700

684492SequenceListing.txt

Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe Gln Thr Asn Asn Pro
705 710 715 720

His Pro Lys Asp Ala Gln Thr Lys Thr Asn Ser Ser Arg Ser Cys Thr
725 730 735

Lys Val His Lys Gln Gly Ile Ala Leu Gly Arg Ser Val Asp Leu Ser
740 745 750

Lys Phe Gln Asn Tyr Glu Glu Leu Val Ala Glu Leu Asp Arg Leu Phe
755 760 765

Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys Asp Trp Leu Ile Val
770 775 780

Tyr Thr Asp Glu Glu Asn Asp Met Met Leu Val Gly Asp Asp Pro Trp
785 790 795 800

Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe Ile Tyr Thr Lys Glu
805 810 815

Glu Val Arg Lys Met Asn Pro Gly Thr Leu Ser Cys Arg Ser Glu Glu
820 825 830

Glu Ala Val Val Gly Glu Gly Ser Asp Ala Lys Asp Ala Lys Ser Ala
835 840 845

Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser
850 855

<210> 4
<211> 8718
<212> DNA
<213> Arabidopsis thaliana

<400> 4
agccattttg taactgacca ccgagtaatc tgtaatctga gctcttttat taatcggatt
60

gaataaattc gcttggagtc cgtcagtcgt gtccgtgagc gcgtgtctca ctcgcttgag
120

684492SequenceListing.txt

ctgatgaagt gcgataatga cgtggcatgt tgggatggag accaaagacc agcattttat
180

tttattttat agtaactaat tttaaaaacc aaacaacctg agattaaaat tttaattttt
240

actgtactgt agtaaatttg ggtcctgatt aagattaggc atatttatct catagtttat
300

aacaagtagc agctgaaatt tgtattacta gcttatagta attaaactaa aaactacggt
360

ccagggtttta aattattggt taaagaagat ataataatat attaagaaaa tagttaatta
420

aggtaaggag gaaagtaggg ttgtgtctgt aggttagggg tcaaagaggg aagagattag
480

gagaaaggaa gcatgaaggc atgaccatt tcttcaatta gtgctcctta atctggtgac
540

acgtgtaggt cccacgtgta atcacttcac attgttattt ttcaaaaaat caattagtaa
600

aaacaaaact ttgtccatca tcaaatagta gtagtttttt atgtgtgggt acaatattgt
660

aagaagctct ccccctttta ctatgtaatt caacccact ctaattttta aaatatttat
720

gtaaagcttt acccgaaaac aatctatcat gggttggtaa tgacacattt cattaacagt
780

gttagagaat gattccttta atttttctac agtaaaatgt taggtgatct cattgtacta
840

catcggaata tactcaaaat tatgtcgtgt aatttagata atggacgaat atgggtttga
900

aatatttatg gataccaac aagatttctt aactagaaag acaaaaaaat agagcacatt
960

ttgctcggtt tccatcaacc ctatttctcc aatttggtca catcatgatc aaaaatacag
1020

tagcaattaa aaaataaaat aacaaatata aatggctata tagatcaacc ctatctagct
1080

attagtatta ctagaaattg acaataaagg aaacattcac gtgtgtgagc atgtactact
1140

684492SequenceListing.txt

ctacacacat gtccacagtt attatatact gagtactagt atacgttgat gttatcaata
1200

ataaaaactc gaaattaagt attatitttct tataataatc tatttaacca tatttgctac
1260

tgtactatfff agtctatfff cttttgccaa cttttgtatt aaatatttgt actattagtt
1320

tcaattatag gtctatcact atgtatatgt ccgaataatg gtctaaaatt gttaatataa
1380

aatacagatt ttattttcagc taaagatagt tgaaattaca caagaaaata gaagagataa
1440

aatgatcaa tcagctatgt aagacgtcgt atggatagtt caataattgt ggtaatactt
1500

aaagacatat atcaaaaatta tcaacaagcc tcgaacacaa actttacaaa aagcctgtgt
1560

ctactttatg agtgtttgat tattaaattg caaggtcgta gtataaaaat ttcgtaggct
1620

ttcaggacac aagattaaat tcattttatct aaatgggtgat ggagtacttt tattttttata
1680

tatcaaaaatg gtgatgatat acgaagacca tatattttaga ttattaaaga aaaaacgaga
1740

aaagaagaaa gaaaatataa aaaaatgggt tttcttttta acggacaaag attcctacaa
1800

tggttgcttt tagaccacac acaaatgcta cacagtactc ttgggtccca cacctcttag
1860

caagtgcgtt accaacacgt gaatttcctc tccccatttt ctcgtccttt tcctctcaat
1920

attgtatcgt ctcgtttttcc ttgtcatatc gcgtgtgacg tgttattggc ttattgctga
1980

acagtcttct tttttatttt ccatcgttat cctgattttt ttttttttcc aaatttgatt
2040

ttcatggttt gtaattttgc aatagatttt gtgtttcaca gagagatagt ttacgtgttg
2100

ttaaaaataa tttgtgcaaa atagtgtgcg tgtgttaaata attaaacgat atataataat
2160

tagaagaaaa taaaaagttt tgtcgcgatt agttatttga tattttacctt gttcttttgt

684492SequenceListing.txt

2220

ttatcgctgc gacaagcacc gacggtataa aatataaaga aaaaaagaaa gagagatgaa
2280

ggtgagatga atgaaagagt cgcagcgaca gatctgaaga gataggagaa agggaatttg
2340

agacgctgaa aattccagcg tctacggaat ggccgaatta cagtcgatgc ggcagagatg
2400

aaaaaaatga gaaatgaaag tgaaaaagag atgagaactt tttttgggtc gcaggtagct
2460

gacgcagcaa tcaacaaaag aacatggcca acgttttagt agatactact ataaaagaaa
2520

aaggttgatt taattcattc gtaatttgga ctttaattttt ttttaggaac actaattaat
2580

cttatttgcc agctgtatga gtggactaca ataaactctt gtctataaac cagattttct
2640

tcctttttta cgcttccact tacaacaata tatgtaaata tgtaattatg acgggggcata
2700

cggaaattta atttttgaag cagattcatc ccattagcca gctgtattaa gtggtaatcc
2760

aagagttaat ttagttgttc agcaaatgat tttagataaa atcaactact agtttaaaat
2820

aactatcgaa tgactgttaa ggcttcgtat tttttgttct gccatcagga tatcataaat
2880

atggttgagg ttcgtataat attcgacgat cttttatata tctgagttgt aattgaatta
2940

gagaaaataa aaaacagata atgaaacgtc tttgtttttc cataaaaaga aaaacagggt
3000

aaattaaagt acgagagatt cacgagacga aaattcctag aggcgcacga tagccaaaag
3060

accatagaaa atgacatccg aaatatcttt aaaatgctaa aatgcacata tttttctggt
3120

gccacgtagc atttttctcc ctctctcggt ctctctacgt ccaccagac ctgcctgttc
3180

acagcacgac aaagccactt cccaataaaa acacaacacc tttcccattg acgctctctt
3240

684492SequenceListing.txt

tcccaaacac cgttatcctc tttacccaat caaaagttga cgcttgctca cgacttgttg
3300

acgccgtag tcccatctaa aaaagtaaag cagcctttct tacttgctaa tcccctctac
3360

acatttaatt tattttctcc cctaattgat tttttttggc aacttgagta tttatttttc
3420

aactcacagt aactgtaaat aaataaaagt attcaactca cagtcaccag taaataaata
3480

ctaccagacc atagtttttt caagaattgt tttgggtcaac aatttttagga tgacttaaata
3540

tgctatatatt ctgggggaaat acgacttgga aatgtctgca atttggttct tttcttcaat
3600

ttatcttctc caatttgttt tttaaaaaat taaatttttag aaaaggatat gtcaattttt
3660

tctattgaaa aggctttatt aaaaaataag aaaaagtgga ggaaagaaaa taaaatcgtc
3720

acttgctttt ggttttgtga ggctgcagac cctgggtcccc cggaatggt tacaaccggt
3780

aatagccggt atgaaagagg gaatggtaac cgggtgaatgc cggttatcca tatgggttag
3840

aagtttaccg cggttgaaat gattgaagct gagttttgac tacctctggt taagcccatt
3900

ggtcgcctca taccagaaa aacaaaagga taggaaagac gaagaaataa aaagagagag
3960

aatgttagag agacaaactc tgagagacaa aacaagagaa aatcgctcgt cgtcggtatt
4020

caagcgtctg tgactccgat aaagcctaga ctagcgagga cggcgagaga gagagagaga
4080

gagctttgga gttgtcgtat ctctaaatcg gaggcaattt gaggtgaaat tgggtggtttt
4140

atcgtttgat tctaggggtt atcttctctg atagttttat cgagtaatgt caaggagcta
4200

aactagtggg gattgtgttt gttagtgaga taaagacaaa ggaaggaatc aagtggacta
4260

684492SequenceListing.txt

ccgaagcgag ttttgagctt tttcagagac ggatttggag atttcttggt gatatcgtct
4320

gcttagaggc ttatttggtt ccagatgaaa cagatctgag cttcggaagg tatggcgagt
4380

tcggagggtt caatgaaagg taatcgtgga ggagataact tctcctcctc tggttttagt
4440

gaccctaagg agactagaaa tgtctccgtc gccggcgagg ggcaaaaaag taattctacc
4500

cgatccgctg cggctgagcg tgcttgtaag tctccgtttc ttagggtttc ttaagcttgg
4560

ttttggttac agactgactt gatctaattt atcttcttct tcttcgtctt catagtggac
4620

cctgaggctg ctctttacag agagctatgg cacgcttggt ctggtccgct tgtgacgggt
4680

cctagacaag acgaccgagt cttctatttt cctcaaggac acatcgagca ggtgagatat
4740

ttcatctatg agttcttgct atttttggct aaatctttga gttaaccctt ctgtgattcg
4800

tacctgttga gatattttct aatgaacttt gtcggtttcc attgttttat gattaggtgg
4860

aggcttcgac gaaccaggcg gcagaacaac agatgcctct ctatgatctt ccgtcaaagc
4920

ttctctgtcg agttattaat gtagatttaa aggtagggtt cttaacttc ttggaaaatt
4980

ttggtttctg tgtcttggtt tgtcagctaa caagagtttt gtttatgatt ttacaagcag
5040

aggcagatac agatgaagtt tatgcgcaga ttactcttct tcctgaggct aatgtaagtt
5100

ttgttttctg atttattggt ttgagtgttg tagaggtgat cttattcttc aagatgctga
5160

attctatata ttttttggtc catacagcaa gacgagaatg caattgagaa agaagcgcct
5220

cttcctccac ctccgagggt ccagggtgcat tcgttctgca aaaccttgac tgcattccgac
5280

acaagtacac atggtggatt ttctgttctt aggcgacatg cggatgaatg tctcccacct
Page 22

684492SequenceListing.txt

5340

ctggttggtg tttcatttgc gcttctaact atctattcat tggcttattt ttcctgaatt
5400

ttgttctaag attgccttca attcattttt tgtttcttcc ctcaggatat gtctcgacag
5460

cctcccactc aagagttagt tgcaaaggat ttgcatgcaa atgagtggcg attcagacat
5520

atattccggg gtataggaat ctgtaacttt tttattttct gtttttctcg agtctgtgtg
5580

tcatcaaact tatctggttg ttgatgtttg tgataatgga ccagggtcaac cacggaggca
5640

tttgctacag agtgggtgga gtgtgtttgt tagctccaaa aggctagttag caggcgatgc
5700

gtttatatatt ctaaggtttg tggatttttag ttcattgttt tcttttagctg tatctgttag
5760

tttctataat gtggaatatc ttaatcttct acaggggcga gaatggagaa ttaagagttag
5820

gtgtaaggcg tgcgatgcga caacaaggaa acgtgccgtc ttctgttata tctagccata
5880

gcatgcatct tggagtactg gccaccgcat ggcatgccat ttcaacaggg actatgttta
5940

cagtctacta caaaccaggg tttgtatttg tattagctca caaaacagct ttcagttttt
6000

tgagctcttt gctttgtatg tctctatatg tctgatgctt ggtagtgaat cactctacta
6060

aattttcatg cgggtgttggt ttgtttaata caggacgagc ccatctgagt ttattgttcc
6120

gttcgatcag tatatggagt ctgttaagaa taactactct attggcatga gattcaaaat
6180

gagatttgaa ggcgaagagg ctcttgagca gaggtaaaac ctgtcttctg cttttgaaat
6240

atgttagctc ttgagccttt ttctcttgga ataacgaacc taacaagttag tattgattta
6300

tattaggttt actggcacia tcgttgggat tgaagagtct gacccacta ggtggccaaa
6360

684492SequenceListing.txt

atcaaagtgg agatccctca aggtatgacc tagtttctag agaggatcaa gactattggt
6420

tgaatataat gaatgctgat tgttcaattg tctttcaggt gagatgggat gagacttcta
6480

gtattcctcg acctgataga gtatctccgt ggaaagtaga gccagctctt gctcctcctg
6540

ctttgagtcc tgttccaatg cctaggccta agaggcccag atcaaataata gcaccttcat
6600

ctcctgactc ttcgatgctt accagagaag gtaatgtctt ccccttccac tgtagtacac
6660

atagtagtgc gtctgaaact taattgaact tgtcagtggg agtctaattc attgtacaca
6720

aaacaggtac aactaaggca aacatggacc ctttaccagc aagcggactt tcaagggctt
6780

tgcaaggtca agaatactcg accttgagga cgaaacatac tgagagtgta gagtgtgatg
6840

ctcctgagaa ttctgttggtc tggcaatctt cagcggatga tgataagggtt gacgtgggtt
6900

cgggttctag aagatatgga tctgagaact ggatgtcctc agccaggcat gaacctactt
6960

acacagattt gctctccggc tttgggacta acatagatcc atcccatggg cagcggatac
7020

ctttttatga ccattcatca tcaccttcta tgcctgcaaa gagaatcttg agtgattcag
7080

aaggcaagtt cgattatctt gctaaccagt ggcagatgat acactctggg ctctccctga
7140

agttacatga atctcctaag gtacctgcag caactgatgc gtctctccaa gggcgatgca
7200

atgttaaata cagcgaatat cctgttctta atgggtctatc gactgagaat gctgggtgga
7260

actggccaat acgtccacgt gctttgaatt attatgagga agtgggtcaat gctcaagcgc
7320

aagctcaggc tagggagcaa gtaacaaaac aacccttcac gatacaagag gagacagcaa
7380

684492SequenceListing.txt

agtcaagaga agggaactgc aggctctttg gcattcctct gaccaacaac atgaatggga
7440

cagactcaac catgtctcag agaaacaact tgaatgatgc tgcggggcctt acacagatag
7500

catcaccaaa gggttcaggac ctttcagatc agtcaaaagg gtcaaaatca acaaacgatc
7560

atcgtgaaca ggggaagacca ttccagacta ataatcctca tccgaaggat gctcaaacga
7620

aaaccaactc aagtaggagt tgcacaaagg taaatTTTTg caatatgtag cacaaagtgt
7680

atgaggttgt gataaccctt gaatcacttt tcaactaaca catgacacat tgatgtaaag
7740

gttcacaagc agggaattgc acttggccgt tcagtggatc tttcaaagtt ccaaaactat
7800

gaggagttag tcgctgagct ggacaggctg tttgagttca atggagagtt gatggctcct
7860

aagaaagatt gggtgatagt ttacacagat gaagagaatg atatgatgct tgttggtgac
7920

gatccttggc agtaagattt tgcaaatttt ccattcttagt ttatatcgat gttagtgttt
7980

ttcttataac actgacacaa tgatctctct tgcagggagt tttgttgcat gggttcgcaaa
8040

atcttcatat acacgaaaga ggaagtgagg aagatgaacc cggggacttt aagctgtagg
8100

agcgaggaag aagcagttgt tggggaagga tcagatgcaa aggacgcaa gtctgcatca
8160

aatccttcat tgtccagcgc tgggaaactct taaacaaaca aaataaccaa caaccctttt
8220

gctgcaagcc gaggtatgta aaagcttttg agatattagt agactagaga cacagccaaa
8280

agtttatgtc attacattcg actgatgttt gttctgttaa tgacagcagg atgggggtcg
8340

attggtggag actggagagc aaaatgggat gatgggttta agataagata ttaaaaatgc
8400

aatTTTTgaa gtatTTTTgtt ggccacttag ataattagca tcttccatca cccttattat

684492SequenceListing.txt

8460

ctatctaata ataattaata gatattataa agtaaaacat aaaaaggtta caggattat
8520

atagtagaat atgaaaagct cttttataag tagaatatga tgggtgtggag ttgtagtcgg
8580

aggctggat cggttctttt tatggatgta tttttttcct tcttccaaag atctcttgaa
8640

gtctttttat tgtttatatt aatcccaatg tacataagtt ttcaagctct tgcccttttt
8700

taattatctt gtcgattc
8718

<210> 5
<211> 2576
<212> DNA
<213> Arabidopsis thaliana

<400> 5
atggcgagtt cggaggtttc aatgaaagg aatcgtggag gagataactt ctctctctt
60

ggttttagtg accctaagga gactagaaat gtctccgtcg ccggcgaggg gcaaaaaagt
120

aattctaccc gatccgctgc ggctgagcgt gctttggacc ctgaggctgc tctttacaga
180

gagctatggc acgcttgtgc tgggtccgctt gtgacggttc ctagacaaga cgaccgagtc
240

ttctattttc ctcaaggaca catcgagcag gtggaggctt cgacgaacca ggcggcagaa
300

caacagatgc ctctctatga tcttccgtca aagcttctct gtcgagttat taatgtagat
360

ttaaagaggc agatacagat gaagtttatg cgcagattac tcttcttcct gaggctaata
420

aagacgagaa tgcaattgag aaagaagcgc ctcttcctcc acctccgagg ttccagggtgc
480

attcgttctg caaaaccttg actgcatccg acacaagtac acatgggtgga ttttctgttc
540

ttaggcgaca tgcggatgaa tgtctccac ctctggatat gtctcgacag cctcccactc
Page 26

684492SequenceListing.txt

600

aagagttagt tgcaaaggat ttgcatgcaa atgagtggcg attcagacat atattccggg
660

gtcaaccacg gaggcatttg ctacagagtg ggtggagtgt gtttgttagc tccaaaaggc
720

tagttgcagg cgatgcgttt atatttctaa ggggcgagaa tggagaatta agagttggtg
780

taaggcgtgc gatgcgacaa caaggaaacg tgccgtcttc tgttatatct agccatagca
840

tgcattcttg agtactggcc accgcatggc atgccatttc aacagggact atgtttacag
900

tctactacaa acccaggacg agcccatctg agtttattgt tccgttcgat cagtatatgg
960

agtctgttaa gaataactac tctattggca tgagattcaa aatgagattt gaaggcgaag
1020

aggctcctga gcagagggtt actggcacia tcgttgggat tgaagagtct gacacctacta
1080

ggtggccaaa atcaaagtgg agatccctca aggtgagatg ggatgagact tctagtattc
1140

ctcgacctga tagagtatct ccgtggaaag tagagccagc tcttgctcct cctgctttga
1200

gtcctgttcc aatgcctagg cctaagaggc ccagatcaaa tatagcacct tcattctcctg
1260

actcttcgat gcttaccaga gaaggtaaa ctaaggcaaa catggaccct ttaccagcaa
1320

gcggactttc aagggtcttg caaggtaag aatactcgac cttgaggacg aaacatactg
1380

agagtgtaga gtgtgatgct cctgagaatt ctgttgcttg gcaatcttca gcggatgatg
1440

ataagggtga cgtgggtttc ggttctagaa gatatggatc tgagaactgg atgtcctcag
1500

ccaggcatga acctacttac acagatttgc tctccggctt tgggactaac atagatccat
1560

cccatgggtca gcggatacct ttttatgacc attcatcatc accttctatg cctgcaaaga
1620

684492SequenceListing.txt

gaatcttgag tgattcagaa ggcaagttcg attatcttgc taaccagtgg cagatgatac
1680

actctgggtct ctccctgaag ttacatgaat ctccctaagg acctgcagca actgatgcgt
1740

ctctccaagg gcgatgcaat gttaaataca gcgaatatcc tgttcttaat ggtctatcga
1800

ctgagaatgc tgggtggtaac tggccaatac gtccacgtgc tttgaattat tatgaggaag
1860

tgggtcaatgc tcaagcgcaa gctcaggcta gggagcaagt aaaaaacaa cccttcacga
1920

tacaagagga gacagcaaag tcaagagaag ggaactgcag gctctttggc attcctctga
1980

ccaacaacat gaatgggaca gactcaacca tgtctcagag aaacaacttg aatgatgctg
2040

cggggcttac acagatagca tcaccaaagg ttcaggacct ttcagatcag tcaaaagggg
2100

caaatcaac aaacgatcat cgtgaacagg gaagaccatt ccagactaat aatcctcatc
2160

cgaaggatgc tcaaacgaaa accaactcaa gtaggagttg cacaaagggt cacaagcagg
2220

gaattgcact tggccgttca gtggatcttt caaagttcca aaactatgag gagttagtgc
2280

ctgagctgga caggctgttt gagttcaatg gagagttgat ggctcctaag aaagattggt
2340

tgatagttta cacagatgaa gagaatgata tgatgcttgt tggtgacgat ccttggcagg
2400

agttttgttg catgggttcgc aaaatcttca tatacacgaa agaggaagtg aggaagatga
2460

acccggggac tttaagctgt aggagcgagg aagaagcagt tgttggggaa ggatcagatg
2520

caaaggacgc caagtctgca tcaaatacctt cattgtccag cgctgggaac tcttaa
2576

<210> 6
<211> 166

684492SequenceListing.txt

<212> PRT

<213> Arabidopsis thaliana

<400> 6

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn
1 5 10 15

Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val
65 70 75 80

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn
85 90 95

Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu
100 105 110

Leu Cys Arg Val Ile Asn Val Asp Leu Lys Arg Gln Ile Gln Met Lys
115 120 125

Phe Met Arg Arg Leu Leu Phe Phe Leu Arg Leu Ile Lys Thr Arg Met
130 135 140

Gln Leu Arg Lys Lys Arg Leu Phe Leu His Leu Arg Gly Ser Arg Cys
145 150 155 160

Ile Arg Ser Ala Lys Pro
165

<210> 7

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> engineered primer sequence

<400> 7

atggcgagtt cggaggttt

19

<210> 8

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> engineered primer sequence

<400> 8

tggacaatga aggatttgat g

21

<210> 9

<211> 2547

<212> DNA

<213> Brassica napus

<400> 9

atggcgagtt cggaggtttc tatgaaagga aatcgtggac gaggagaaaa cttctcctcc

60

gctgggttaca gtgacccgac ggtcgccggc gaggcgcaga aaactcagtc taaccgatct

120

gtggctgcag agcgcgttgt cgacccggaa gctgctctct accgtgagct gtggcacgct

180

tgtgctggtc ctctcgtgac agtccctcga caagatgacc gagtcttcta cttccctcag

240

gggcacatcg agcaggtgga agcatcgaca aatcaagctg cagaacagca gatgcctctc

300

tatgatcttc cttcgaagat cttttgtcgt gtcattaatg ttgatttaaa ggcagaggca

360

gacaccgacg aagtttatgc gcagattact cttcttccgg agcctgttca agacgagaat

420

tcaatagaga aagaggcgcc tcctcctccg cccccaaggt tccaagtgca ctccttctgc

480

684492SequenceListing.txt

aaaaccttga ctgcatcgga cacaagtaca catggtggat tttctgtgct taggcggcat
 540
 gcggatgaat gtctcccacc tctggatatg tcacgtcaac ctctactca ggagttagtt
 600
 gcaaaagatc tgcattgcaag cgagtggcgt ttccgacata tttccgagg tcaaccacga
 660
 aggcatttgc ttcagagtgg atggagcgtg tttgttagct ccaagaggct ggtcgcaggc
 720
 gatgctttta tatttctaag gggcgagaat ggagaattac gtgtgggtgt aaggcgtgca
 780
 atgcggcagc aaggaaatgt gccatcctct gttatatcaa gccacagcat gcatctcgga
 840
 gtattggcca ctgcctggca cgctatttca actggaacca tgtttacagt ctactataaa
 900
 ccgaggacta gtccttcaga gtttattggt ccgtttgatc agtatacgga gtccgtgaag
 960
 attaactact ccataggcat gagatttaaa atgagatttg aaggcgaaga ggctcccag
 1020
 cagaggttta ctggcacaat cgttgggatt gaagactctg accccacgag gtgggcaaaa
 1080
 tcaaaatgga gatccctcaa ggtacggtgg gatgagacca ctagtattcc tcgccctgat
 1140
 agagtatccc cgtggaagat agagccagct ctttctcctc ctgctttgag ccctgtacca
 1200
 atgcctaggc ctaagaggcc cagatctaata ctagcttctt caactccgga ctcttccatg
 1260
 cgcataaggg aaggctcatc taaggcaaac atggaccctt taccggcaag tggactatca
 1320
 agggctttgc aaggtaaga atacccgacc ttgagaacga aacatgttga gagtgtagaa
 1380
 tgcgatgctc ctgaaaattc ggttgtgtgg caatcgtcaa ctgatgatga caaggttgat
 1440
 gtgatttcag cttctaggag atatgagaac tggatatcct caggtaggca tggacctact
 1500

684492SequenceListing.txt

tgacacggatt tgcttttctgg ctttgggaca aacatagaac cacctcacgg tcatcagata
1560

cctttttatg accgtttatc atcaccacct tctgtggctg caaggaaaat cctcagcgac
1620

caggatggca agtttgaata tcttgctaac cagtggatga tgcactcagg cttttccctg
1680

aagttacatg aatctcctaa agtccctgcc gcatctgatg cctctttcca agggataggc
1740

aatcccaatt acggcgaata tgctttgcct cgtgcagtga cgactgagaa tgctgctggc
1800

aactggccaa tacgtccacg tgctctaaat tattttgaag aagcggttca tgctcaggct
1860

agagagcatg tgacaaaacg tcctgcggtc gtacaagagg aggcagcaaa gccaagagac
1920

gggaactgca ggcttttttg cattcctctg gtgaacaacg tgaatgggac agatacaact
1980

ttgtctcaga gaaacaattt gaatgaccct gcggggccta cgcagatggc atcaccaaag
2040

gttcaggatc tttctgacca gtccaaaggg tcaaaatcga caaatgatca tcgtgagcaa
2100

ggacgaccat tcccggttag taaaccccat ccgaaagacg ttcaaacc aaacaaactca
2160

tgtaggagct gcacgaaggt tcagaagcag gggattgcac ttggccggtc agtggatctc
2220

tcaaagttcc agaactatga ggagttgggt actgaattgg ataggctggt tgagttcaat
2280

ggagagttga tggctcctaa gaaagattgg ctgatagttt acacagatga tgagaatgat
2340

atgatgcttg ttggagacga tccttggcag gagttttggt gcatggttcg taaaatcttc
2400

atatacacga aagaggaggt caggaagatg aaccggggaa ctctatgctg taggaacgag
2460

gaagaaccag ttgttgggga aggatcagat gcaaaggacg cgaagtctgc atcaaadcct
2520

tcattgtcca gcgccgaaa ctcttaa

684492SequenceListing.txt

2547

<210> 10
 <211> 848
 <212> PRT
 <213> Brassica napus

<400> 10

Met Ala Ser Ser Glu Val ser Met Lys Gly Asn Arg Gly Arg Gly Glu
 1 5 10 15

Asn Phe Ser Ser Ala Gly Tyr ser Asp Pro Thr Val Ala Gly Glu Ala
 20 25 30

Gln Lys Thr Gln Ser Asn Arg Ser Val Ala Ala Glu Arg Val Val Asp
 35 40 45

Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His Ala Cys Ala Gly Pro
 50 55 60

Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val Phe Tyr Phe Pro Gln
 65 70 75 80

Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn Gln Ala Ala Glu Gln
 85 90 95

Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Ile Leu Cys Arg Val Ile
 100 105 110

Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp Glu Val Tyr Ala Gln
 115 120 125

Ile Thr Leu Leu Pro Glu Pro Val Gln Asp Glu Asn Ser Ile Glu Lys
 130 135 140

Glu Ala Pro Pro Pro Pro Pro Arg Phe Gln Val His Ser Phe Cys
 145 150 155 160

Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val
 165 170 175

684492SequenceListing.txt

Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Arg
 180 185 190
 Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp Leu His Ala Ser Glu
 195 200 205
 Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu
 210 215 220
 Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly
 225 230 235 240
 Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly
 245 250 255
 Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val Pro Ser Ser Val Ile
 260 265 270
 Ser Ser His Ser Met His Leu Gly Val Leu Ala Thr Ala Trp His Ala
 275 280 285
 Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr Lys Pro Arg Thr Ser
 290 295 300
 Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr Thr Glu Ser Val Lys
 305 310 315 320
 Ile Asn Tyr Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu
 325 330 335
 Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Glu Asp
 340 345 350
 Ser Asp Pro Thr Arg Trp Ala Lys Ser Lys Trp Arg Ser Leu Lys Val
 355 360 365
 Arg Trp Asp Glu Thr Thr Ser Ile Pro Arg Pro Asp Arg Val Ser Pro
 370 375 380

684492SequenceListing.txt

Trp Lys Ile Glu Pro Ala Leu Ser Pro Pro Ala Leu Ser Pro Val Pro
385 390 395 400

Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Leu Ala Ser Ser Thr Pro
405 410 415

Asp Ser Ser Met Arg Ile Arg Glu Gly Ser Ser Lys Ala Asn Met Asp
420 425 430

Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu Gln Gly Gln Glu Tyr
435 440 445

Pro Thr Leu Arg Thr Lys His Val Glu Ser Val Glu Cys Asp Ala Pro
450 455 460

Glu Asn Ser Val Val Trp Gln Ser Ser Thr Asp Asp Asp Lys Val Asp
465 470 475 480

Val Ile Ser Ala Ser Arg Arg Tyr Glu Asn Trp Ile Ser Ser Gly Arg
485 490 495

His Gly Pro Thr Cys Thr Asp Leu Leu Ser Gly Phe Gly Thr Asn Ile
500 505 510

Glu Pro Pro His Gly His Gln Ile Pro Phe Tyr Asp Arg Leu Ser Ser
515 520 525

Pro Pro Ser Val Ala Ala Arg Lys Ile Leu Ser Asp Gln Asp Gly Lys
530 535 540

Phe Glu Tyr Leu Ala Asn Gln Trp Met Met His Ser Gly Leu Ser Leu
545 550 555 560

Lys Leu His Glu Ser Pro Lys Val Pro Ala Ala Ser Asp Ala Ser Phe
565 570 575

Gln Gly Ile Gly Asn Pro Asn Tyr Gly Glu Tyr Ala Leu Pro Arg Ala
580 585 590

684492SequenceListing.txt

Val Thr Thr Glu Asn Ala Ala Gly Asn Trp Pro Ile Arg Pro Arg Ala
595 600 605

Leu Asn Tyr Phe Glu Glu Ala Val His Ala Gln Ala Arg Glu His Val
610 615 620

Thr Lys Arg Pro Ala Val Val Gln Glu Glu Ala Ala Lys Pro Arg Asp
625 630 635 640

Gly Asn Cys Arg Leu Phe Gly Ile Pro Leu Val Asn Asn Val Asn Gly
645 650 655

Thr Asp Thr Thr Leu Ser Gln Arg Asn Asn Leu Asn Asp Pro Ala Gly
660 665 670

Pro Thr Gln Met Ala Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser
675 680 685

Lys Gly Ser Lys Ser Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe
690 695 700

Pro Val Ser Lys Pro His Pro Lys Asp Val Gln Thr Lys Thr Asn Ser
705 710 715 720

Cys Arg Ser Cys Thr Lys Val Gln Lys Gln Gly Ile Ala Leu Gly Arg
725 730 735

Ser Val Asp Leu Ser Lys Phe Gln Asn Tyr Glu Glu Leu Val Thr Glu
740 745 750

Leu Asp Arg Leu Phe Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys
755 760 765

Asp Trp Leu Ile Val Tyr Thr Asp Asp Glu Asn Asp Met Met Leu Val
770 775 780

Gly Asp Asp Pro Trp Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe
785 790 795 800

684492SequenceListing.txt

Ile Tyr Thr Lys Glu Glu Val Arg Lys Met Asn Pro Gly Thr Leu Cys
805 810 815

Cys Arg Asn Glu Glu Glu Pro Val Val Gly Glu Gly Ser Asp Ala Lys
820 825 830

Asp Ala Lys Ser Ala Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser
835 840 845

<210> 11
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 11
aaacatatgc caacgggatc atgggattac
30

<210> 12
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 12
aaactgcagc gttcccggag atacgaaaac
30

<210> 13
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 13
aaacatatgg gaattcacaac tcggaaagtc
30

684492SequenceListing.txt

<210> 14
<211> 29
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 14
aaactgcagg gtccgtttat tagttcctc
29

<210> 15
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 15
gatctagagg cgcgccggat ctgagaactg gatg
34

<210> 16
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 16
gaggatccat ttaaatccgc agcatcattc aagt
34

<210> 17
<211> 35
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 17
gatctagagg cgcgccgcga tatgagaact ggata
35

684492SequenceListing.txt

<210> 18
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 18
gaggatccat ttaaattgtag gccccgcagg gtca
34

<210> 19
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 19
gaattcccaa cgggatcatg ggattac
27

<210> 20
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 20
ccatggcgtt cccggagata cgaaaac
27

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 21
gaattccctg gattagtgcag agcc
24

684492SequenceListing.txt

<210> 22
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 22
ccatgggaga gtgtgtgtgt acgatg
26

<210> 23
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 23
ctcgaggaag gtatggcgag t
21

<210> 24
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 24
ggatcctcca gtctccacca a
21

<210> 25
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 25
ctcgagatgg cgagttcgga ggtttc
26

684492SequenceListing.txt

<210> 26
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 26
ggatccttaa gagtttccgg cgctgg
26

<210> 27
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 27
catatgcctg gattagtgca aggcaa
26

<210> 28
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 28
ctgcaggaga gtgtgtgtgt acgatg
26

<210> 29
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> engineered primer sequence

<400> 29
aaaacgcgtc gttcccggag atacgaaaac
30

684492SequenceListing.txt

<210> 30
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 30
acgcgtgaga gtgtgtgtct acgatg
26

<210> 31
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 31
catatggaga atttgacaga ttggtg
26

<210> 32
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 32
ctgcaggttt atcgtcttga gacttc
26

<210> 33
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 33
aaacccggga tggcgattcg gaaggaggaa
30

684492SequenceListing.txt

<210> 34
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 34
aaaggatcct tatggagtgg ctacgattgc
30

<210> 35
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 35
aaacccggga tgacagaact caacttccac
30

<210> 36
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 36
aaaggatccc taattttgca ccaaatgccg
30

<210> 37
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 37
cccgggggtg tgttcgttgt gtaacc
26

684492SequenceListing.txt

<210> 38
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 38
ggatccgatc aagaatcagc ccaagc
26

<210> 39
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 39
cccgggcact aagatgatga cttctc
26

<210> 40
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 40
ggatccaagc gactcattag acttgt
26

<210> 41
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 41
aaacatatgg atacacaagt tctttgg
27

684492SequenceListing.txt

<210> 42
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 42
aaactgcaga ttcttctctc tttgtttaa
29

<210> 43
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 43
catatggtga catcttttta gcataggttc
30

<210> 44
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 44
ctgcagtttt gatccttttt taagaaactt
30

<210> 45
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 45
catatgtgta actgcaaagt gtagttcgg
29

684492SequenceListing.txt

<210> 46
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 46
ctgcagaatc tattttttctc tctctctc
28

<210> 47
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 47
tggttcacgt agtgggccat cg
22

<210> 48
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 48
gagtgggtgg agtgtgtttg
20

<210> 49
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 49
gagtgggtgg agtgtgtttg
20

684492SequenceListing.txt

<210> 50
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 50
agttggtttt cgtttgagca t
21

<210> 51
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 51
gagtgggtgg agtgtgtttg
20

<210> 52
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 52
agttggtttt cgtttgagca t
21

<210> 53
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> engineered primer sequence

<400> 53
cacttgaagg gtggtgccaa g
21

684492SequenceListing.txt

<210> 54
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> engineered primer sequence

<400> 54
 cctggtgtcg ccaacgaagt c
 21

<210> 55
 <211> 2580
 <212> DNA
 <213> Arabidopsis thaliana

<400> 55
 atggcgagtt cggaggtttc aatgaaaggt aatcgtggag gagataactt ctctcctct
 60

ggttttagtg accctaagga gactagaaat gtctccgtcg ccggcgaggg gcaaaaaagt
 120

aattctaccc gatccgctgc ggctgagcgt gctttggacc ctgaggctgc tctttacaga
 180

gagctatggc acgcttgtgc tgggccgctt gtgacggttc ctagacaaga cgaccgagtc
 240

ttctattttc ctcaaggaca catcgagcag gtggaggctt cgacgaacca ggcggcagaa
 300

caacagatgc ctctctatga tcttccgtca aagcttctct gtcgagttat taatgtagat
 360

ttaaaggcag aggcagatac agatgaagtt tatgcgagga ttactcttct tcctgaggct
 420

aatcaagacg agaatgcaat tgagaaagaa gcgcctcttc ctccacctcc gaggttccag
 480

gtgcattcgt tctgcaaaac cttgactgca tccgacacaa gtacacatgg tggattttct
 540

gttcttaggc gacatgcgga tgaatgtctc ccacctctgg atatgtctcg acagcctccc
 600

actcaagagt tagttgcaaa ggatttgcat gcaaagaggt ggcgattcag acatatattc
 660

684492SequenceListing.txt

cggggtcaac cacggaggca tttgctacag agtgggtgga gtgtgtttgt tagctccaaa
720
aggctagttg caggcgatgc gtttatatTT ctaaggggcg agaatggaga attaagagtt
780
ggtgtaaggc gtgcatgacg acaacaagga aacgtgccgt cttctgttat atctagccat
840
agcatgcac ttggagtact ggccaccgca tggcatgcc tttcaacagg gactatgttt
900
acagtctact acaaaccag gacgagccca tctgagttta ttgttccgtt cgatcagtat
960
atggagtctg ttaagaataa ctactctatt ggcattgagat tcaaatgag atttgaaggc
1020
gaagaggctc ctgagcagag gtttactggc acaatcgttg ggattgaaga gtctgaccc
1080
actaggtggc caaatcaaa gtggagatcc ctcaaggatga gatgggatga gacttctagt
1140
attcctcgac ctgatagagt atctccgttg aaagtagagc cagctcttgc tcctcctgct
1200
ttgagtcctg ttccaatgcc taggcctaag agggccagat caaatatagc accttcatct
1260
cctgactctt cgatgcttac cagagaaggc acaactaagg caaacatgga ccctttacca
1320
gcaagcggac tttcaagggt cttgcaaggc caagaatact cgaccttgag gacgaaacat
1380
actgagagtg tagagtgtga tgctcctgag aattctgttg tctggcaatc ttcagcggat
1440
gatgataagg ttgacgtggc ttcgggttct agaagatatg gatctgagaa ctggatgtcc
1500
tcagccaggc atgaacctac ttacacagat ttgctctccg gctttgggac taacatagat
1560
ccatcccatg gtcagcggat acctttttat gaccattcat catcaccttc tatgcctgca
1620
aagagaatct tgagtgattc agaaggcaag ttcgattatc ttgctaacca gtggcagatg
1680

684492SequenceListing.txt

atacactctg gtctctccct gaagttacat gaatctccta aggtacctgc agcaactgat
1740

gcgtctctcc aagggcgatg caatgttaaa tacagcgaat atcctgttct taatggctcta
1800

tcgactgaga atgctggtgg taactggcca atacgtccac gtgctttgaa ttattatgag
1860

gaagtgggtca atgctcaagc gcaagctcag gctagggagc aagtaacaaa acaacccttc
1920

acgatacaag aggagacagc aaagtcaaga gaagggaact gcaggctctt tggcattcct
1980

ctgaccaaca acatgaatgg gacagactca accatgtctc agagaaacaa cttgaatgat
2040

gctgcggggc ttacacagat agcatcacca aagggttcagg acctttcaga tcagtcaaaa
2100

gggtcaaaat caacaaacga tcatcgtgaa caggggaagac cattccagac taataatcct
2160

catccgaagg atgctcaaac gaaaaccaac tcaagtagga gttgcacaaa ggttcacaag
2220

caggggaattg cacttggccg ttcagtggat ctttcaaagt tccaaaacta tgaggagtta
2280

gtcgctgagc tggacaggct gtttgagtgc aatggagagt tgatggctcc taagaaagat
2340

tggttgatag ttacacaga tgaagagaat gatatgatgc ttgttggtga cgatccttgg
2400

caggagtttt gttgcatggt tcgcaaaatc ttcataatac cgaaagagga agtgaggaag
2460

atgaacccgg ggactttaag ctgtaggagc gaggaagaag cagttggttg ggaaggatca
2520

gatgcaaagg acgccaagtc tgcatacaat ctttcattgt ccagcgctgg gaactcttaa
2580

<210> 56
<211> 2576
<212> DNA
<213> Arabidopsis thaliana

<400> 56

684492SequenceListing.txt

atggcgagtt cggaggtttc aatgaaaggt aatcgtggag gagataactt ctcctcctct
60

ggtttttagtg accctaagga gactagaaat gtctccgtcg ccggcgaggg gcaaaaaagt
120

aattctaccc gatccgctgc ggctgagcgt gctttggacc ctgaggctgc tctttacaga
180

gagctatggc acgcttgtgc tgggccgctt gtgacggttc ctagacaaga cgaccgagtc
240

ttctattttc ctcaaggaca catcgagcag gtggaggctt cgacgaacca ggcggcagaa
300

caacagatgc ctctctatga tcttccgtca aagcttctct gtcgagttat taatgtagat
360

ttaaagaggc agatacagat gaagtttatg cgcagattac tcttcttcct gaggctaata
420

aagacgagaa tgcaattgag aaagaagcgc ctcttcctcc acctccgagg ttccagggtgc
480

attcgttctg caaaaccttg actgcatccg acacaagtac acatgggtgga ttttctgttc
540

ttaggcgaca tgcggatgaa tgtctccac ctctggatat gtctcgacag cctcccactc
600

aagagttagt tgcaaaggat ttgcatgcaa atgagtggcg attcagacat atattccggg
660

gtcaaccacg gaggcatttg ctacagagtg ggtggagtgt gtttgtttagc tccaaaaggc
720

tagttgcagg cgatgcgttt atatttctaa ggggcgagaa tggagaatta agagttggtg
780

taaggcgtgc gatgcgacaa caaggaaacg tgccgtcttc tgttatatct agccatagca
840

tgcatcttgg agtactggcc accgcatggc atgccatttc aacagggact atgtttacag
900

tctactacaa acccaggacg agcccatctg agtttattgt tccgttcgat cagtatatgg
960

agtctgttaa gaataactac tctattggca tgagattcaa aatgagattt gaaggcgaag
1020

aggctcctga gcagaggttt actggcacaa tcgttgggat tgaagagtct gtcctacta
Page 51

684492SequenceListing.txt

1080

ggtggccaaa atcaaagtgg agatccctca aggtgagatg ggatgagact tctagtattc
1140

ctcgacctga tagagtatct ccgtggaaag tagagccagc tcttgctcct cctgctttga
1200

gtcctgttcc aatgcctagg cctaagaggc ccagatcaaa tatagcacct tcattctctg
1260

actcttcgat gcttaccaga gaaggtacaa ctaaggcaaa catggaccct ttaccagcaa
1320

gcggactttc aagggctttg caaggtcaag aatactcgac cttgaggacg aaacatactg
1380

agagtgtaga gtgtgatgct cctgagaatt ctgttgctctg gcaatcttca gcggatgatg
1440

ataaggttga cgtgggtttcg ggttctagaa gatatggatc tgagaactgg atgtcctcag
1500

ccaggcatga acctacttac acagatttgc tctccggctt tgggactaac atagatccat
1560

cccatgggtca gcggatacct ttttatgacc attcatcatc accttctatg cctgcaaaga
1620

gaatcttgag tgattcagaa ggcaagttcg attatcttgc taaccagtgg cagatgatac
1680

actctgggtct ctccctgaag ttacatgaat ctctaaggt acctgcagca actgatgcgt
1740

ctctccaagg gcgatgcaat gttaaataca gcgaatatcc tgttcttaat ggtctatcga
1800

ctgagaatgc tgggtggtaac tggccaatac gtccacgtgc tttgaattat tatgaggaag
1860

tggtcaatgc tcaagcgcaa gctcaggcta gggagcaagt aacaaaacaa cccttcacga
1920

tacaagagga gacagcaaag tcaagagaag ggaactgcag gctctttggc attcctctga
1980

ccaacaacat gaatgggaca gactcaacca tgtctcagag aaacaacttg aatgatgctg
2040

cggggcttac acagatagca tcaccaaagg ttcaggacct ttcagatcag tcaaaagggt
2100

684492SequenceListing.txt

caaaatcaac aaacgatcat cgtgaacagg gaagaccatt ccagactaat aatcctcatc
2160

cgaaggatgc tcaaacgaaa accaactcaa gtaggagttg cacaaagggt cacaagcagg
2220

gaattgcact tggccgttca gtggatcttt caaagttcca aaactatgag gagttagtcg
2280

ctgagctgga caggctgttt gagttcaatg gagagttgat ggctcctaag aaagattggt
2340

tgatagttta cacagatgaa gagaatgata tgatgcttgt tggtgacgat ccttggcagg
2400

agttttgttg catggttcgc aaaatcttca tatacacgaa agaggaagtg aggaagatga
2460

acccggggac ttttaagctgt aggagcgagg aagaagcagt tgttggggaa ggatcagatg
2520

caaaggacgc caagtctgca tcaaatcctt cattgtccag cgctgggaac tcttaa
2576

<210> 57

<211> 859

<212> PRT

<213> Arabidopsis thaliana

<400> 57

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn
1 5 10 15

Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val
65 70 75 80

684492SequenceListing.txt

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn
 85 90 95
 Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu
 100 105 110
 Leu Cys Arg Val Ile Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp
 115 120 125
 Glu Val Tyr Ala Gln Ile Thr Leu Leu Pro Glu Ala Asn Gln Asp Glu
 130 135 140
 Asn Ala Ile Glu Lys Glu Ala Pro Leu Pro Pro Pro Pro Arg Phe Gln
 145 150 155 160
 Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His
 165 170 175
 Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro
 180 185 190
 Leu Asp Met Ser Arg Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp
 195 200 205
 Leu His Ala Asn Glu Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro
 210 215 220
 Arg Arg His Leu Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys
 225 230 235 240
 Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly
 245 250 255
 Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val
 260 265 270
 Pro Ser Ser Val Ile Ser Ser His Ser Met His Leu Gly Val Leu Ala
 275 280 285

684492SequenceListing.txt

Thr Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr
 290 295 300
 Lys Pro Arg Thr Ser Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr
 305 310 315 320
 Met Glu Ser Val Lys Asn Asn Tyr Ser Ile Gly Met Arg Phe Lys Met
 325 330 335
 Arg Phe Glu Gly Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile
 340 345 350
 Val Gly Ile Glu Glu Ser Asp Pro Thr Arg Trp Pro Lys Ser Lys Trp
 355 360 365
 Arg Ser Leu Lys Val Arg Trp Asp Glu Thr Ser Ser Ile Pro Arg Pro
 370 375 380
 Asp Arg Val Ser Pro Trp Lys Val Glu Pro Ala Leu Ala Pro Pro Ala
 385 390 395 400
 Leu Ser Pro Val Pro Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Ile
 405 410 415
 Ala Pro Ser Ser Pro Asp Ser Ser Met Leu Thr Arg Glu Gly Thr Thr
 420 425 430
 Lys Ala Asn Met Asp Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu
 435 440 445
 Gln Gly Gln Glu Tyr Ser Thr Leu Arg Thr Lys His Thr Glu Ser Val
 450 455 460
 Glu Cys Asp Ala Pro Glu Asn Ser Val Val Trp Gln Ser Ser Ala Asp
 465 470 475 480
 Asp Asp Lys Val Asp Val Val Ser Gly Ser Arg Arg Tyr Gly Ser Glu
 485 490 495

684492SequenceListing.txt

Asn Trp Met Ser Ser Ala Arg His Glu Pro Thr Tyr Thr Asp Leu Leu
 500 505 510
 Ser Gly Phe Gly Thr Asn Ile Asp Pro Ser His Gly Gln Arg Ile Pro
 515 520 525
 Phe Tyr Asp His Ser Ser Ser Pro Ser Met Pro Ala Lys Arg Ile Leu
 530 535 540
 Ser Asp Ser Glu Gly Lys Phe Asp Tyr Leu Ala Asn Gln Trp Gln Met
 545 550 555 560
 Ile His Ser Gly Leu Ser Leu Lys Leu His Glu Ser Pro Lys Val Pro
 565 570 575
 Ala Ala Thr Asp Ala Ser Leu Gln Gly Arg Cys Asn Val Lys Tyr Ser
 580 585 590
 Glu Tyr Pro Val Leu Asn Gly Leu Ser Thr Glu Asn Ala Gly Gly Asn
 595 600 605
 Trp Pro Ile Arg Pro Arg Ala Leu Asn Tyr Tyr Glu Glu Val Val Asn
 610 615 620
 Ala Gln Ala Gln Ala Gln Ala Arg Glu Gln Val Thr Lys Gln Pro Phe
 625 630 635 640
 Thr Ile Gln Glu Glu Thr Ala Lys Ser Arg Glu Gly Asn Cys Arg Leu
 645 650 655
 Phe Gly Ile Pro Leu Thr Asn Asn Met Asn Gly Thr Asp Ser Thr Met
 660 665 670
 Ser Gln Arg Asn Asn Leu Asn Asp Ala Ala Gly Leu Thr Gln Ile Ala
 675 680 685
 Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser Lys Gly Ser Lys Ser
 690 695 700

684492SequenceListing.txt

Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe Gln Thr Asn Asn Pro
705 710 715 720

His Pro Lys Asp Ala Gln Thr Lys Thr Asn Ser Ser Arg Ser Cys Thr
725 730 735

Lys Val His Lys Gln Gly Ile Ala Leu Gly Arg Ser Val Asp Leu Ser
740 745 750

Lys Phe Gln Asn Tyr Glu Glu Leu Val Ala Glu Leu Asp Arg Leu Phe
755 760 765

Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys Asp Trp Leu Ile Val
770 775 780

Tyr Thr Asp Glu Glu Asn Asp Met Met Leu Val Gly Asp Asp Pro Trp
785 790 795 800

Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe Ile Tyr Thr Lys Glu
805 810 815

Glu Val Arg Lys Met Asn Pro Gly Thr Leu Ser Cys Arg Ser Glu Glu
820 825 830

Glu Ala Val Val Gly Glu Gly Ser Asp Ala Lys Asp Ala Lys Ser Ala
835 840 845

Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser
850 855

<210> 58

<211> 166

<212> PRT

<213> Arabidopsis thaliana

<400> 58

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Gly Asp Asn
1 5 10 15

684492SequenceListing.txt

Phe Ser Ser Ser Gly Phe Ser Asp Pro Lys Glu Thr Arg Asn Val Ser
20 25 30

Val Ala Gly Glu Gly Gln Lys Ser Asn Ser Thr Arg Ser Ala Ala Ala
35 40 45

Glu Arg Ala Leu Asp Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His
50 55 60

Ala Cys Ala Gly Pro Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val
65 70 75 80

Phe Tyr Phe Pro Gln Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn
85 90 95

Gln Ala Ala Glu Gln Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Leu
100 105 110

Leu Cys Arg Val Ile Asn Val Asp Leu Lys Arg Gln Ile Gln Met Lys
115 120 125

Phe Met Arg Arg Leu Leu Phe Phe Leu Arg Leu Ile Lys Thr Arg Met
130 135 140

Gln Leu Arg Lys Lys Arg Leu Phe Leu His Leu Arg Gly Ser Arg Cys
145 150 155 160

Ile Arg Ser Ala Lys Pro
165

<210> 59

<211> 2547

<212> DNA

<213> Brassica napus

<400> 59

atggcgagtt cggaggtttc tatgaaagga aatcgtggac gaggagaaaa cttctcctcc
60

gctggttaca gtgacccgac ggtcgccggc gaggcgcaga aaactcagtc taaccgatct
120

684492SequenceListing.txt

gtggctgcag agcgcgttgt cgacccggaa gctgctctct accgtgagct gtggcacgct
180

tgtgctggtc ctctcgtgac agtccctcga caagatgacc gagtcttcta cttccctcag
240

gggcacatcg agcaggtgga agcatcgaca aatcaagctg cagaacagca gatgcctctc
300

tatgatcttc cttcgaagat cttttgtcgt gtcattaatg ttgatttaaa ggcagaggca
360

gacaccgacg aagtttatgc gcagattact cttcttccgg agcctgttca agacgagaat
420

tcaatagaga aagaggcgcc tcctcctccg cccccaaggt tccaagtga ctccttctgc
480

aaaaccttga ctgcatcgga cacaagtaca catggtggat tttctgtgct taggcggcat
540

gcggatgaat gtctcccacc tctggatatg tcacgtcaac ctcctactca ggagttagtt
600

gcaaaagatc tgcattgcaag cgagtggcgt ttccgacata ttttccgagg tcaaccacga
660

aggcatttgc ttcagagtgg atggagcgtg tttgttagct ccaagaggct ggctgcaggc
720

gatgctttta tatttctaag gggcgagaat ggagaattac gtgtgggtgt aaggcgtgca
780

atgcggcagc aaggaaatgt gccatcctct gttatatcaa gccacagcat gcatctcgga
840

gtattggcca ctgcctggca cgctatttca actggaacca tgtttacagt ctactataaa
900

ccgaggacta gtccttcaga gtttattggt ccgtttgatc agtatacgga gtccgtgaag
960

attaactact ccataggcat gagatttaaa atgagatttg aaggcgaaga ggctcccgag
1020

cagaggttta ctggcacaat cgttgggatt gaagactctg accccacgag gtgggcaaaa
1080

tcaaaatgga gatccctcaa ggtacggtgg gatgagacca ctagtattcc tcgccctgat
1140

agagtatccc cgtggaagat agagccagct ctttctcctc ctgctttgag ccctgtacca

684492SequenceListing.txt

1200

atgcctaggc ctaagaggcc cagatctaata ctagcttctt caactccgga ctcttccatg
1260

cgcataaggg aaggctcatc taaggcaaac atggaccctt taccggcaag tggactatca
1320

agggtcttgc aaggtaaga atacccgacc ttgagaacga aacatgttga gagtgtagaa
1380

tgcgatgctc ctgaaaattc ggttggtgtg caatcgtcaa ctgatgatga caaggttgat
1440

gtgatttcag cttctaggag atatgagaac tggatatcct caggtaggca tggacctact
1500

tgcacggatt tgctttctgg ctttgggaca aacatagaac cacctcacgg tcatcagata
1560

cctttttatg accgtttatc atcaccacct tctgtggctg caaggaaaat cctcagcgac
1620

caggatggca agtttgaata tcttgctaac cagtggatga tgcactcagg cttttccctg
1680

aagttacatg aatctcctaa agtccctgcc gcactctgat cctctttcca agggataggc
1740

aatcccaatt acggcgaata tgctttgcct cgtgcagtga cgactgagaa tgctgctggc
1800

aactggccaa tacgtccacg tgctctaaat tattttgaag aagcggttca tgctcaggct
1860

agagagcatg tgacaaaacg tcctgcggtc gtacaagagg aggcagcaaa gccaagagac
1920

gggaactgca ggcttttttg cattcctctg gtgaacaacg tgaatgggac agatacaact
1980

ttgtctcaga gaaacaattt gaatgaccct gcggggccta cgcagatggc atcaccaaag
2040

gttcaggatc tttctgacca gtccaaaggg tcaaaatcga caaatgatca tcgtgagcaa
2100

ggacgaccat tcccggttag taaaccccat ccgaaagacg ttcaaacc aaacaaactca
2160

tgtaggagct gcacgaaggt tcagaagcag gggattgcac ttggccggtc agtggatctc
2220

684492SequenceListing.txt

tcaaagttcc agaactatga ggagttgggt actgaattgg ataggctgtt tgagttcaat
2280

ggagagttga tggctcctaa gaaagattgg ctgatagttt acacagatga tgagaatgat
2340

atgatgcttg ttggagacga tccttggcag gagttttgtt gcatggttcg taaaatcttc
2400

atatacacga aagaggaggt caggaagatg aaccgggaa ctctatgctg taggaacgag
2460

gaagaaccag ttgttgggga aggatcagat gcaaaggacg cgaagtctgc atcaaadcct
2520

tcattgtcca gcgccgaaa ctcttaa
2547

<210> 60
<211> 848
<212> PRT
<213> Brassica napus

<400> 60

Met Ala Ser Ser Glu Val Ser Met Lys Gly Asn Arg Gly Arg Gly Glu
1 5 10 15

Asn Phe Ser Ser Ala Gly Tyr Ser Asp Pro Thr Val Ala Gly Glu Ala
20 25 30

Gln Lys Thr Gln Ser Asn Arg Ser Val Ala Ala Glu Arg Val Val Asp
35 40 45

Pro Glu Ala Ala Leu Tyr Arg Glu Leu Trp His Ala Cys Ala Gly Pro
50 55 60

Leu Val Thr Val Pro Arg Gln Asp Asp Arg Val Phe Tyr Phe Pro Gln
65 70 75 80

Gly His Ile Glu Gln Val Glu Ala Ser Thr Asn Gln Ala Ala Glu Gln
85 90 95

Gln Met Pro Leu Tyr Asp Leu Pro Ser Lys Ile Leu Cys Arg Val Ile
Page 61

684492SequenceListing.txt

100

105

110

Asn Val Asp Leu Lys Ala Glu Ala Asp Thr Asp Glu Val Tyr Ala Gln
 115 120 125

Ile Thr Leu Leu Pro Glu Pro Val Gln Asp Glu Asn Ser Ile Glu Lys
 130 135 140

Glu Ala Pro Pro Pro Pro Pro Pro Arg Phe Gln Val His Ser Phe Cys
 145 150 155 160

Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val
 165 170 175

Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Arg
 180 185 190

Gln Pro Pro Thr Gln Glu Leu Val Ala Lys Asp Leu His Ala Ser Glu
 195 200 205

Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu
 210 215 220

Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly
 225 230 235 240

Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly
 245 250 255

Val Arg Arg Ala Met Arg Gln Gln Gly Asn Val Pro Ser Ser Val Ile
 260 265 270

Ser Ser His Ser Met His Leu Gly Val Leu Ala Thr Ala Trp His Ala
 275 280 285

Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr Lys Pro Arg Thr Ser
 290 295 300

Pro Ser Glu Phe Ile Val Pro Phe Asp Gln Tyr Thr Glu Ser Val Lys
 Page 62

684492SequenceListing.txt

305

310

315

320

Ile Asn Tyr Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu
 325 330 335

Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Glu Asp
 340 345 350

Ser Asp Pro Thr Arg Trp Ala Lys Ser Lys Trp Arg Ser Leu Lys Val
 355 360 365

Arg Trp Asp Glu Thr Thr Ser Ile Pro Arg Pro Asp Arg Val Ser Pro
 370 375 380

Trp Lys Ile Glu Pro Ala Leu Ser Pro Pro Ala Leu Ser Pro Val Pro
 385 390 395 400

Met Pro Arg Pro Lys Arg Pro Arg Ser Asn Leu Ala Ser Ser Thr Pro
 405 410 415

Asp Ser Ser Met Arg Ile Arg Glu Gly Ser Ser Lys Ala Asn Met Asp
 420 425 430

Pro Leu Pro Ala Ser Gly Leu Ser Arg Val Leu Gln Gly Gln Glu Tyr
 435 440 445

Pro Thr Leu Arg Thr Lys His Val Glu Ser Val Glu Cys Asp Ala Pro
 450 455 460

Glu Asn Ser Val Val Trp Gln Ser Ser Thr Asp Asp Asp Lys Val Asp
 465 470 475 480

Val Ile Ser Ala Ser Arg Arg Tyr Glu Asn Trp Ile Ser Ser Gly Arg
 485 490 495

His Gly Pro Thr Cys Thr Asp Leu Leu Ser Gly Phe Gly Thr Asn Ile
 500 505 510

Glu Pro Pro His Gly His Gln Ile Pro Phe Tyr Asp Arg Leu Ser Ser
 Page 63

684492SequenceListing.txt

515

520

525

Pro Pro Ser Val Ala Ala Arg Lys Ile Leu Ser Asp Gln Asp Gly Lys
 530 535 540

Phe Glu Tyr Leu Ala Asn Gln Trp Met Met His Ser Gly Leu Ser Leu
 545 550 555 560

Lys Leu His Glu Ser Pro Lys Val Pro Ala Ala Ser Asp Ala Ser Phe
 565 570 575

Gln Gly Ile Gly Asn Pro Asn Tyr Gly Glu Tyr Ala Leu Pro Arg Ala
 580 585 590

Val Thr Thr Glu Asn Ala Ala Gly Asn Trp Pro Ile Arg Pro Arg Ala
 595 600 605

Leu Asn Tyr Phe Glu Glu Ala Val His Ala Gln Ala Arg Glu His Val
 610 615 620

Thr Lys Arg Pro Ala Val Val Gln Glu Glu Ala Ala Lys Pro Arg Asp
 625 630 635 640

Gly Asn Cys Arg Leu Phe Gly Ile Pro Leu Val Asn Asn Val Asn Gly
 645 650 655

Thr Asp Thr Thr Leu Ser Gln Arg Asn Asn Leu Asn Asp Pro Ala Gly
 660 665 670

Pro Thr Gln Met Ala Ser Pro Lys Val Gln Asp Leu Ser Asp Gln Ser
 675 680 685

Lys Gly Ser Lys Ser Thr Asn Asp His Arg Glu Gln Gly Arg Pro Phe
 690 695 700

Pro Val Ser Lys Pro His Pro Lys Asp Val Gln Thr Lys Thr Asn Ser
 705 710 715 720

Cys Arg Ser Cys Thr Lys Val Gln Lys Gln Gly Ile Ala Leu Gly Arg
 Page 64

684492SequenceListing.txt

725

730

735

Ser Val Asp Leu Ser Lys Phe Gln Asn Tyr Glu Glu Leu Val Thr Glu
740 745 750

Leu Asp Arg Leu Phe Glu Phe Asn Gly Glu Leu Met Ala Pro Lys Lys
755 760 765

Asp Trp Leu Ile Val Tyr Thr Asp Asp Glu Asn Asp Met Met Leu Val
770 775 780

Gly Asp Asp Pro Trp Gln Glu Phe Cys Cys Met Val Arg Lys Ile Phe
785 790 795 800

Ile Tyr Thr Lys Glu Glu Val Arg Lys Met Asn Pro Gly Thr Leu Cys
805 810 815

Cys Arg Asn Glu Glu Glu Pro Val Val Gly Glu Gly Ser Asp Ala Lys
820 825 830

Asp Ala Lys Ser Ala Ser Asn Pro Ser Leu Ser Ser Ala Gly Asn Ser
835 840 845

<210> 61
<211> 791
<212> PRT
<213> Oryza sativa

<400> 61

Gly Asp Pro Leu Tyr Asp Glu Leu Trp His Ala Cys Ala Gly Pro Leu
1 5 10 15

Val Thr Val Pro Arg Val Gly Asp Leu Val Phe Tyr Phe Pro Gln Gly
20 25 30

His Ile Glu Gln Val Glu Ala Ser Met Asn Gln Val Ala Asp Ser Gln
35 40 45

Met Arg Leu Tyr Asp Leu Pro Ser Lys Leu Leu Cys Arg Val Leu Asn
50 55 60

684492SequenceListing.txt

Val Glu Leu Lys Ala Glu Gln Asp Thr Asp Glu Val Tyr Ala Gln Val
 65 70 75 80
 Met Leu Met Pro Glu Pro Glu Gln Asn Glu Met Ala Val Glu Lys Thr
 85 90 95
 Thr Pro Thr Ser Gly Pro Val Gln Ala Arg Pro Pro Val Arg Ser Phe
 100 105 110
 Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser
 115 120 125
 Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Thr
 130 135 140
 Gln Ser Pro Pro Thr Gln Glu Leu Val Ala Lys Asp Leu His Ser Met
 145 150 155 160
 Asp Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu
 165 170 175
 Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala
 180 185 190
 Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val
 195 200 205
 Gly Val Arg Arg Ala Met Arg Gln Leu Ser Asn Val Pro Ser Ser Val
 210 215 220
 Ile Ser Ser Gln Ser Met His Leu Gly Val Leu Ala Thr Ala Trp His
 225 230 235 240
 Ala Ile Asn Thr Lys Ser Met Phe Thr Val Tyr Tyr Lys Pro Arg Thr
 245 250 255
 Ser Pro Ser Glu Phe Ile Ile Pro Tyr Asp Gln Tyr Met Glu Ser Val
 260 265 270

684492SequenceListing.txt

Lys Asn Asn Tyr Ser Val Gly Met Arg Phe Arg Met Arg Phe Glu Gly
 275 280 285
 Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr Ile Ile Gly Ser Glu
 290 295 300
 Asn Leu Asp Pro Val Trp Pro Glu Ser Ser Trp Arg Ser Leu Lys Val
 305 310 315 320
 Arg Trp Asp Glu Pro Ser Thr Ile Pro Arg Pro Asp Arg Val Ser Pro
 325 330 335
 Trp Lys Ile Glu Pro Ala Ser Ser Pro Pro Val Asn Pro Leu Pro Leu
 340 345 350
 Ser Arg Val Lys Arg Pro Arg Pro Asn Ala Pro Pro Ala Ser Pro Glu
 355 360 365
 Ser Pro Ile Leu Thr Lys Glu Ala Ala Thr Lys Val Asp Thr Asp Pro
 370 375 380
 Ala Gln Ala Gln Arg Ser Gln Asn Ser Thr Val Leu Gln Gly Gln Glu
 385 390 395 400
 Gln Met Thr Leu Arg Ser Asn Leu Thr Glu Ser Asn Asp Ser Asp Val
 405 410 415
 Thr Ala His Lys Pro Met Met Trp Ser Pro Ser Pro Asn Ala Ala Lys
 420 425 430
 Ala His Pro Leu Thr Phe Gln Gln Arg Pro Pro Met Asp Asn Trp Met
 435 440 445
 Gln Leu Gly Arg Arg Glu Thr Asp Phe Lys Asp Val Arg Ser Gly Ser
 450 455 460
 Gln Ser Phe Gly Asp Ser Pro Gly Phe Phe Met Gln Asn Phe Asp Glu
 465 470 475 480

684492SequenceListing.txt

Ala Pro Asn Arg Leu Thr Ser Phe Lys Asn Gln Phe Gln Asp Gln Gly
485 490 495

Ser Ala Arg His Phe Ser Asp Pro Tyr Tyr Tyr Val Ser Pro Gln Pro
500 505 510

Ser Leu Thr Val Glu Ser Ser Thr Gln Met His Thr Asp Ser Lys Glu
515 520 525

Leu His Phe Trp Asn Gly Gln Ser Thr Val Tyr Gly Asn Ser Arg Asp
530 535 540

Arg Pro Gln Asn Phe Arg Phe Glu Gln Asn Ser Ser Ser Trp Leu Asn
545 550 555 560

Gln Ser Phe Ala Arg Pro Glu Gln Pro Arg Val Ile Arg Pro His Ala
565 570 575

Ser Ile Ala Pro Val Glu Leu Glu Lys Thr Glu Gly Ser Gly Phe Lys
580 585 590

Ile Phe Gly Phe Lys Val Asp Thr Thr Asn Ala Pro Asn Asn His Leu
595 600 605

Ser Ser Pro Met Ala Ala Thr His Glu Pro Met Leu Gln Thr Pro Ser
610 615 620

Ser Leu Asn Gln Leu Gln Pro Val Gln Thr Asp Cys Ile Pro Glu Val
625 630 635 640

Ser Val Ser Thr Ala Gly Thr Ala Thr Glu Asn Glu Lys Ser Gly Gln
645 650 655

Gln Ala Gln Gln Ser Ser Lys Asp Val Gln Ser Lys Thr Gln Val Ala
660 665 670

Ser Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Val Ala Leu Gly
675 680 685

684492SequenceListing.txt

Arg Ser Val Asp Leu Ser Lys Phe Ser Asn Tyr Asp Glu Leu Lys Ala
690 695 700

Glu Leu Asp Lys Met Phe Glu Phe Asp Gly Glu Leu Val Ser Ser Asn
705 710 715 720

Lys Asn Trp Gln Ile Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu
725 730 735

Val Gly Asp Asp Pro Trp Glu Glu Phe Cys Ser Ile Val Arg Lys Ile
740 745 750

Tyr Ile Tyr Thr Lys Glu Glu Val Gln Lys Met Asn Ser Lys Ser Asn
755 760 765

Ala Pro Arg Lys Asp Asp Ser Ser Glu Asn Glu Lys Gly His Leu Pro
770 775 780

Met Pro Asn Lys Ser Asp Asn
785 790

<210> 62
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 62
tggttcacgt agtgggcat cg
22

<210> 63
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 63

gagtgggtgg agtgtgtttg
20

<210> 64
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 64
agttggtttt cgtttgagca t
21

<210> 65
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 65
cacttgaagg gtggtgccaa g
21

<210> 66
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 66
cctgttgtcg ccaacgaagt c
21